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BIRCH STEWART KOLASCH & BIRCH  
PO BOX 747  
FALLS CHURCH, VA 22040-0747

EXAMINER

CHEN, TSE W

ART UNIT PAPER NUMBER

2116

DATE MAILED: 07/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/820,665

Applicant(s)

ZHUO, JESSE

Examiner

Tse Chen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 26 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. It is hereby acknowledged that the following papers have been received and placed of record in the file: Amendment A dated May 26, 2004.

2. Claims 1-17 are presented for examination.

#### ***Claim Objections***

3. Claims 13-16 are objected to because of the following informalities: claims 13 and 15 are identical as are claims 14 and 16. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3, 10, 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Bilir, U.S. Patent 5923099.

6. In re claim 1, Bilir discloses a safe shutdown device [backup controller 50 and timer 55] for an uninterruptible power supply (UPS) system [30] [fig.1; abstract; col.2, ll.38-41], which comprises:

- A switch module [inherently, a switch module in the broadest interpretation is needed to generate the loss of AC power signal], which generates an OFF signal [fig.1, loss of AC power] and outputs the OFF signal to a central processing unit (CPU) [backup controller 50; part of 50 is responsible for processing the various signals] built in the UPS [col.3, ll.60-67] [col.3, ll.1-10], the CPU generating a first shutdown signal [fig.1, begin shut

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down] and a second shutdown signal [col.3, ll.24-34; inherently, timer is started by a signal in the broadest interpretation] and transmitting the first shutdown signal to external apparatuses [processing system 10] connected to the UPS [fig.1] after the OFF signal being processed by the CPU so as to shut down the external apparatuses [col.3, ll.11-23; begin shut down signal is issued to processing system after loss of AC power signal had been processed by backup controller to realize a loss of power has occurred].

- A counting module [timer 55], which starts counting after receiving the second shutdown signal sent out from the CPU that receives the OFF signal and outputs a third shutdown signal [inherently, a signal in the broadest interpretation is given off by timer at expiration in order for subsequent shutdown event to occur] when a counting value coincides with a predetermined time value [4 minutes] is generated [col.3, ll.24-34].
- A shutdown module [backup controller 50; part of 50 is responsible for turning off the UPS], which receives the third shutdown signal and turns off the UPS [fig.1, turn off UPS power; fig.3, power off] in response to the third shutdown signal [fig.2, 62; col.3, ll.24-34].

7. As to claim 2, Bilir discloses that the safe shutdown device is installed in the UPS [col.3, ll.60-67].

8. As to claim 3, Bilir discloses that the safe shutdown device is electrically connected to the UPS [fig.3, external UPS interface 51 with UPS connection].

9. As to claim 10, Bilir discloses that the predetermined time value is preset in the counting module [col.3, ll.24-29].

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10. In re claim 17, Bilir teaches the safe shutdown device. Therefore, Bilir teaches the method of operating the device.

***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 4-6, 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bilir as applied to claim 1 above, and further in view of Spears et al., U.S. Patent 6304981, hereinafter Spears.

13. In re claims 4-6, Bilir discloses each and every limitation of the claims as discussed above in reference to claim 1. Bilir did not disclose explicitly a multiple external apparatuses environment.

14. Spears discloses a safe shutdown device [fault tolerant CPU] for a UPS system [information handling system 120] [col.3, l.58 – col.4, l.3].

15. As per claim 4, Spears discloses that the external apparatuses comprise more than one computer [servers 122, 124, 126 and workstations 128-144] [col.4, ll.1-7].

16. As per claim 5, Spears discloses that the external apparatuses comprise more than one main control computing device [servers 122, 124, and 126; col.4, ll.1-7].

17. As per claim 6, Spears discloses that the external apparatuses comprises a main control computing device [server 122] and more than one other external devices [workstations 128-144] [col.4, ll.1-7].

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18. It would have been obvious to one of ordinary skill in the art, having the teachings of Bilir and Spears before him at the time the invention was made, to use the safe shutdown device disclosed by Bilir in the UPS system with multiple external apparatuses disclosed by Spears as the system is a known system suitable for use with the safe shutdown device of Bilir. One of ordinary skill in the art would have been motivated to make such a combination as it provides a way to extend the protection against power anomalies to multiple computing devices and maximize the battery resource of the UPS with better power down sequencing [Spears: col.2, ll.1-10].

19. In re claim 11, Spears discloses the main control computing device [server 122] that has a shutdown signal processing module [part of fault tolerant CPU; inherently, a shutdown signal processing module in the broadest interpretation is needed to receive a signal from the UPS to power down] and a main control computing shutdown module [part of fault tolerant CPU; inherently, a main control computing shutdown module in the broadest interpretation is needed to shut itself down when commanded to do so] [col.3, l.58 – col.4, l.7], a fourth shutdown signal [inherently, a shutdown signal in the broadest interpretation is needed to shutdown the workstations] being output to other external apparatuses [workstations 128-144] in the connection so as to shut down the external apparatuses [col.4, ll.1-7], and a main control computing shutdown signal [inherently, a main control computing shutdown signal in the broadest interpretation is needed to shutdown server 122] being output to the main control computing shutdown module to turn off the main control computing device [col.4, ll.1-7].

20. Spears did not discuss the details of the modules and signals.

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21. Bilir, as discussed above in reference to claim 1, discloses the main control computing device [processing system 10 with safe shutdown device of claim 1 installed in processing system 10; col.3, ll.60-67; safe shutdown device as a board to be installed] that has a shutdown signal processing module [part of backup controller 50; inherently, a shutdown signal processing module in the broadest interpretation is needed to receive the loss of AC power or similar signal] and a main control computing shutdown module [part of backup controller 50; inherently, a main control computing shutdown module in the broadest interpretation is needed to shut the main control computing device down when the power off signal is received], the shutdown signal processing module receiving the first shutdown signal [fig.1, loss of AC power] and sending out a fourth shutdown signal [fig.1, begin shutdown] and a main control computing shutdown signal [fig.3, power off].

22. Therefore, it would have been obvious to one of ordinary skill in the art, having the teachings of Bilir and Spears before him at the time the invention was made, to use the safe shutdown device disclosed by Bilir in the main control computing device of the UPS system with multiple external apparatuses disclosed by Spears as the system is a known system suitable for use with the safe shutdown device of Bilir. One of ordinary skill in the art would have been motivated to make such a combination as it provides a way to extend the protection against power anomalies to multiple computing devices and maximize the battery resource of the UPS with better power down sequencing [Spears: col.2, ll.1-10].

23. In re claim 12, Spears discloses a first shutdown signal [inherently, a shutdown signal in the broadest interpretation is needed from the UPS to power down] that is output to the main control computing device [server 122] [col.3, l.58 – col.4, l.7] and a fourth shutdown signal

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signal [inherently, a shutdown signal in the broadest interpretation is needed to shutdown the workstations] that is send out to at least one other external apparatus [any of workstation 128-144] in connection to shut down the power [col.4, ll.1-7].

24. Spears did not discuss the details of the signals.

25. Bilir, as discussed above in reference to claim 1, discloses the first shutdown signal [fig.1, loss of AC power] that is output to the main control computing device [processing system 10], which then sends out a fourth shutdown signal [fig.1, begin shutdown] to shut down the power [col.3, ll.60-67; safe shutdown device as a board to be installed in processing system 10].

26. Therefore, it would have been obvious to one of ordinary skill in the art, having the teachings of Bilir and Spears before him at the time the invention was made, to use the safe shutdown device disclosed by Bilir in the main control computing device of the UPS system with multiple external apparatuses disclosed by Spears as the system is a known system suitable for use with the safe shutdown device of Bilir. One of ordinary skill in the art would have been motivated to make such a combination as it provides a way to extend the protection against power anomalies to multiple computing devices and maximize the battery resource of the UPS with better power down sequencing [Spears: col.2, ll.1-10].

27. As to claims 13 and 15, Spears discloses the predetermined time value is preset in the main control computing device and will be output to a counting module [inherently, a counting module in the broadest interpretation to count the time] when the main control computing device receives the first shutdown signal [col.1, ll.15-28; col.2, ll.1-5].

28. As to claims 14 and 16, Spears discloses the predetermined time value that is computed by the main control computing device according to the shutdown times returned from other



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external apparatuses after the main control computing device receives the first shutdown signal and the computation result is output to a counting module [inherently, a counting module in the broadest interpretation to count the time] [col.7, l.39 – col.8, l.65].

29. Claims 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bilir as applied to claim 1 above, and further in view of Lee et al., U.S. Patent 5815409, hereinafter Lee.

30. In re claim 7, Bilir discloses each and every limitation of the claims as discussed above in reference to claim 1. Bilir did not discuss the details of the switch module.

31. Lee discloses a safe shutdown device [control circuit 30] for a UPS system [col.3, ll.1-18; power supply is uninterrupted in shutdown], wherein:

- The switch module is an ON/OFF switch device [SW311] [col.5, ll.37-45].

32. It would have been obvious to one of ordinary skill in the art, having the teachings of Bilir and Lee before him at the time the invention was made, to use the switch module disclosed by Lee in the safe shutdown device disclosed by Bilir as the ON/OFF switch device disclosed by Lee is a well known device suitable for use with the safe shutdown device of Bilir. One of ordinary skill in the art would have been motivated to make such a combination as it provides a way to protect systems from being damaged when a power supply is accidentally switched off [Lee: col.3, ll.1-18].

33. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bilir as applied to claim 1 above, and further in view of Forrest et al., U.S. Patent 5553296, hereinafter Forrest.

34. In re claim 8, Bilir discloses each and every limitation of the claims as discussed above in reference to claim 1. Bilir did not discuss the details of the switch module.

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35. Forrest discloses a switch module [touch screen 40, touch screen controller, and power subsystem 10] that is a liquid crystal [col.2, ll.50-51] touch control switch device [col.4, l.63 – col.5, l.4].

36. It would have been obvious to one of ordinary skill in the art, having the teachings of Bilir and Forrest before him at the time the invention was made, to use the switch module disclosed by Forrest in the safe shutdown device disclosed by Bilir as the liquid crystal touch control switch device disclosed by Forrest is a known device suitable for use with the safe shutdown device of Bilir. One of ordinary skill in the art would have been motivated to make such a combination as it eliminates the need for a separate power switch [Forrest: col.1, ll.41-46].

37. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bilir as applied to claim 1 above, and further in view of Arakawa et al., U.S. Patent 6105138, hereinafter Arakawa.

38. In re claim 8, Bilir discloses each and every limitation of the claims as discussed above in reference to claim 1. Bilir did not discuss the details of the switch module.

39. Arakawa discloses the switch module [service processor 3 and electric source control circuit 4] that is a remote controlled receiver [fig.1; col.5, ll.40-47; receives signal from remote terminal 1].

40. It would have been obvious to one of ordinary skill in the art, having the teachings of Bilir and Arakawa before him at the time the invention was made, to use the switch module disclosed by Arakawa in the safe shutdown device disclosed by Bilir as the remote controlled receiver disclosed by Arakawa is a known device suitable for use with the safe shutdown device

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of Bilir. One of ordinary skill in the art would have been motivated to make such a combination as provides a way to control power remotely [Arakawa: col.1, 1.6 – col.2, 1.62].

***Response to Arguments***

41. Applicant's arguments, with respect to the claim informalities have been fully considered and are persuasive. The previous objection of claims 13 and 14 has been withdrawn.

42. Applicant's arguments with respect to the rejection of the claims have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tse Chen whose telephone number is (703) 305-8580. The examiner can normally be reached on Monday - Friday 9AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Browne can be reached on (703) 308-1159. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tse Chen  
July 27, 2004



**REHANA PERVEEN  
PRIMARY EXAMINER**